

Application of Ajith K. Kumar et al.

Art Unit 3281

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Confirmation No. 3281

Examiner Ronnie M. Mancho

For MULTI-LEVEL RAILWAY OPERATIONS OPTIMIZATION SYSTEM AND
METHOD

CLAIMS FOR DISCUSSION DURING EXAMINER INTERVIEW

Claim 1 (currently amended): A system for management of a multi-level railway system and its operational components, the railway system comprising:

- a first processor associated with a railroad infrastructure level configured to control an operation of a railroad infrastructure operating within the railroad infrastructure level;

- a second processor associated with a railroad track network level configured to control an operation of a railroad track network within the railroad track network level, wherein the railroad track network level is a sub-level of said railroad infrastructure level;

- a third processor associated with a train level configured to control an operation of a train operating within the train level, wherein the train level is a sub-level of said railroad track network level;

- a fourth processor associated with a consist level configured to control an operation of a consist of a train within the consist level, wherein the consist level is a sub-level of said train level; and

- a fifth processor associated with a locomotive level configured to control an operation of a locomotive within the locomotive level, wherein the locomotive level is a sub-level of said consist level;

- each processor associated with each level being configured to provide to the processor associated with at least one other level operational parameters that define operational characteristics and data related to the level with which it is associated; and

each processor optimizing the operation within its associated level and ~~[[to]]~~
~~cooperate~~ cooperating with a processor associated with at least one other level to
optimize ~~[[an]]~~ operations ~~of the multi-level railway system~~ across all the levels of the
multi-level railway system.

Claim 14 (currently amended): A multi-level system for management of a
railway system and its operational components, the railway system comprising:

a first level configured to optimize an operation within the first level, said first
level including first level operational parameters defining changes in operational
characteristics and data of the first level over a period of time; and

a second level configured to optimize an operation within the second level, said
second level including second level operational parameters defining changes in the
operational characteristic and data of the second level over a period of time, wherein the
second level is a sub-level of said first level;

said first level providing the second level with the first level operational
parameters, and the second level providing the first level with the second level
operational parameters; and

said optimizing the operation within the first level and said optimizing the
operation within the second level each being a function of ~~optimizing a system~~ of the
first and second level operational parameters ~~optimization parameter~~.

Claim 15 (currently amended): The system of claim 14 wherein the ~~system~~
~~optimization parameter is~~ first level operational parameter and second level operational
parameter are indicative of fuel usage in the railway system.

Claim 16 (currently amended): The system of claim 14 wherein the ~~system~~
~~optimization parameter is an~~ first level operational parameter and second level
operational parameter are indicative of an economic valuation of the time of delivery of
cargo carried in the railway system.